FINAL SYNOPSIS OF THE PROPOSED THESIS TO BE SUBMITTED FOR THE Ph.D. (COMMERCE) DEGREE OF MANGALORE UNIVERSITY

Title of the Thesis

"FINANCIAL PERFORMANCE ANALYSIS OF SELECT HEALTH INSURANCE COMPANIES IN INDIA"

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2025

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1. INTRODUCTION:

The insurance sector significantly contributes to a country's economic growth by driving investment, generating employment, facilitating capital formation, mobilizing savings, and mitigating risks. The year 2000 marked a pivotal moment in the history of India's insurance industry, as it was privatized, leading to substantial transformations. This shift resulted in the introduction of new products, improved customer service standards, the emergence of innovative distribution and delivery channels, and advancements in operational processes. Most importantly, it fostered the integration of institutions, services, and products. Before 2000, insurance companies in India were entirely owned and regulated by the Government. As per the Insurance Laws (Amendment) Act, 2021, private and foreign companies were allowed to invest up to 74% in Indian insurance companies. However, as announced in the Union Budget 2025, the Foreign Direct Investment (FDI) limit has been increased to 100%, allowing foreign entities to fully own Indian insurance companies. This reform grants general insurance companies greater flexibility in product innovation, design, and pricing, subject to regulatory oversight by the Insurance Regulatory and Development Authority of India (IRDAI).
Insurance is a critical financial instrument that provides individuals, businesses, and organizations with protection against financial losses and uncertainties. It serves as a risk mitigation tool, allowing policyholders to transfer the financial burden of unforeseen events to insurance companies. The fundamental concept of insurance revolves around the principle of shared risk, where a large pool of individuals or entities contributes premiums to a central fund, which is then used to compensate those who experience covered losses.

India's insurance industry comprises 58 companies, including 25 engaged in life insurance and 33 in non-life insurance. Among life insurers, the Life Insurance Corporation (LIC) is the only public sector entity. In the non-life insurance segment, there are six public sector insurers, including two specialized insurers, along with five stand-alone health insurance companies. Additionally, the industry includes a sole national re-insurer, the General Insurance Corporation of India (GIC Re). Other key stakeholders in the Indian insurance market include individual and corporate agents, brokers, surveyors, and third-party administrators responsible for handling health insurance claims. (IRDAI 2022-23).

As per Swiss Re Sigma Report (No. 03/2023) global insurance premium for non-life insurance is estimated to grow by 1.4 per cent in real terms in 2023. Whereas Health insurance premiums are estimated to fall by 0.6 per cent during the 2023. Overall, the global insurance premium volumes (non-life and life) are projected to grow by 1.1 per cent in 2023 and 1.7 per cent in 2024 in real terms, below the 10-year trend of 2.6 percent.

In 2022, India was ranked as 10^{th} largest insurance market in the world with a premium volume of 131 billion USD (with 1.9 per cent share in global insurance premium) and it is projected to become the sixth largest by the year 2032 as India's insurance market is one of the fastest growing insurance markets in the world. The growth outlook for India is based on strong economic growth, rising disposable incomes, a young population, increased risk awareness, digital penetration, and regulatory developments (IRDAI Annual report 2022-23).

Government's policy of insuring the uninsured has gradually pushed insurance penetration in the country and proliferation of insurance schemes. During 2022-23, the non-life insurance industry underwrote a total direct premium of Rs.2.57 lakh crore in India registering a growth of 16.40 per cent from previous year. Out of which, 27 private sector insurers (including standalone health insurers) have underwritten Rs. 1.58 lakh crore. The specialized insurers underwrote gross direct premium amounting to Rs. 15,818 crores. The public sector general insurers together contributed to 38.42 per cent of the market share while the private sector general insurers contributed to the remaining 61.58 per cent.

Health Insurance Segment reported growth of 21.32 percent with the premium amounting to Rs. 97,633 crore during 2022-23(IRDAI annual report 2022-23). Moreover, since the commencement of covid, health insurance premiums have been the main driver of the non-life insurance industry. In spite of a long nationwide lockdown, the health segment grew significantly by 34.2 per cent in YTD (year-to-date) July 2022(Mayank bathwal,2023).

DEFINITIONS OF FINANCIAL PERFORMANCE ANALYSIS

Financial performance analysis is a method used to evaluate a firm's financial strengths and weaknesses by establishing a relationship between various elements of the balance sheet and profit and loss account (Foster, 1986). Organizational performance depends on its ability to acquire and manage resources effectively to create a competitive advantage (Iswatia & Anshoria, 2007). Analyzing financial statements helps assess a company's operational efficiency and financial standing (Panday, 2015). Additionally, it plays a crucial role in short-term and long-term forecasting and business growth. A company's strategic planning should be based on its financial strengths and weaknesses, making financial statement analysis a fundamental step in decision-making. Understanding a firm’s past performance is essential for predicting its future (Panday, 2015).

Initially, financial statements are examined to determine the outcomes of a firm's operations, and subsequently, these results are interpreted by stakeholders to support managerial decision-making. Therefore, analysis and interpretation are interconnected and mutually supportive, as interpretation cannot occur without analysis, and analysis holds little value without interpretation (Sharma & Gupta, 1998). Financial performance analysis involves evaluating financial statements, which provide critical insights into an organization's operational efficiency, profitability, liquidity, and solvency. As Metcalf and Titard define, "Financial analysis is a process of evaluating the relationship between various components of financial statements to obtain a better understanding of a firm's financial position and operating performance" (Sharma & Gupta, 1998). The primary objective of financial analysis is to assess a business’s financial health. Before drawing conclusions about a company's financial stability, analysts employ various techniques to examine financial statements. Every business, including health insurance companies, must understand its relative position within the industry through such analysis.

IMPORTANCE OF FINANCIAL PERFORMANCE ANALYSIS

Financial performance analysis is a critical aspect of evaluating the health and success of a business or organization. It involves assessing and interpreting financial data to gain insights into how well an entity is managing its financial resources and achieving its objectives. It helps in assessing the profitability of a company, which is crucial for its sustainability and growth. Analyzing key financial ratios such as net profit margin, return on assets, and return on equity can indicate how efficiently the company is generating profits.

Financial performance analysis assists in identifying and quantifying financial risks. By examining factors such as debt levels, liquidity, and solvency, stakeholders can gauge the financial stability and creditworthiness of the entity. This is essential for both investors and creditors in making informed decisions. It provides insights into how efficiently a company is managing its resources and operating its core business activities. This can help identify areas where cost reductions, process improvements, or resource reallocation may be necessary. Investors and shareholders use financial performance analysis to make informed investment decisions. By evaluating financial statements and performance metrics, they can assess whether a company is a sound investment and has the potential for future growth. Businesses use financial analysis to inform their strategic planning processes. By understanding past performance, they can make data-driven decisions about future investments, expansions, or cost-cutting measures. Financial analysis allows for comparisons with industry peers and competitors. Benchmarking can help a company determine how it stacks up against others in the same market and identify areas for improvement. Companies must comply with various financial reporting and accounting standards. Effective financial performance analysis ensures that the entity remains in compliance with these regulations, reducing the risk of legal and financial penalties. Financial performance analysis provides a means of communicating the company's financial health to various stakeholders, such as shareholders, employees, and the public. It offers transparency and builds trust. It assists in the allocation of resources, whether in the form of capital investment, debt financing, or dividends. By understanding the financial position, a company can make informed decisions about how to use its funds effectively. Financial analysis can serve as an early warning system for potential financial difficulties. By identifying negative trends or deteriorating ratios, management can take corrective actions before issues become critical. financial performance analysis is crucial for decision-making, risk management, and overall management of a company's financial health. It provides the

necessary information and insights to support strategic planning, operational improvements, and sustainable growth.

Framework for the Analysis

The conceptual framework forms the foundation of this study, providing a structured approach to analysing the financial performance and policyholder perceptions of select health insurance companies in India. As the health insurance sector continues to grow and evolve in response to changing demographics, rising healthcare costs, and regulatory interventions, assessing its financial stability and consumer satisfaction has become paramount. This chapter outlines the theoretical and analytical constructs that guide this research, ensuring a comprehensive examination of the interplay between financial metrics and stakeholder perceptions.

The financial performance of health insurance companies is critical not only for their sustainability but also for building trust and confidence among policyholders. A robust financial structure ensures efficient claims management, innovative product offerings, and compliance with regulatory standards, all of which are essential in a competitive and consumer-centric market. At the same time, policyholder perceptions and experiences reflect the practical implications of financial performance, influencing customer retention and market reputation.

This chapter integrates established financial analysis models and consumer behaviour theories to create a dual-dimensional framework. On the one hand, it utilizes the traditional and CARAMEL model to examine key financial parameters, such as capital adequacy, asset quality, reinsurance, management efficiency, earnings, and liquidity. On the other hand, it incorporates a detailed analysis of policyholder perceptions, exploring factors such as claim processes, coverage benefits, and overall satisfaction.

By synthesizing these two perspectives, the conceptual framework enables a holistic understanding of the factors driving the performance and perception of health insurance companies in India. It also lays the groundwork for empirical analysis, helping to bridge the gap between financial indicators and consumer experience. This chapter sets the stage for addressing the research objectives and hypotheses, providing a roadmap for subsequent data collection and analysis.

Balance Sheet

The balance sheet is a crucial financial statement that provides a snapshot of a company's financial position at a specific point in time. It highlights the company's assets, liabilities, and equity, serving as a fundamental tool for assessing financial performance and operational sustainability. For health insurance companies, the balance sheet offers insights into resource allocation, risk management, and compliance with regulatory requirements. These elements are vital for maintaining financial stability and delivering value to stakeholders (Pandey, 2020).

The balance sheet plays a pivotal role in assessing the financial performance of health insurance companies by providing insights into asset composition and quality, liabilities, and equity. Evaluating the structure and quality of assets, including investments, loans, and reserves, is essential for understanding how companies manage their resources, with high asset quality ensuring financial stability and risk mitigation (Kothari & Warner, 2021). The liabilities section reflects obligations such as outstanding claims, reinsurance payables, and actuarial reserves, and a well-managed liabilities position demonstrates a company's ability to honor commitments and maintain solvency (IRDAI, 2023). Shareholders' equity, representing the residual interest in assets after liabilities, highlights the company's financial resilience, with a strong equity base and adherence to regulatory capital requirements underscoring its capacity to absorb financial shocks (Reddy et al., 2022).

The balance sheet metrics to evaluate the financial performance of health insurance companies, including total assets, investments and reserves, technical reserves, debt-to-equity ratio, net worth, and reinsurance payables. Total assets indicate the scale of operations and investment capabilities, with higher assets reflecting greater financial strength and income-generating potential (Pandey, 2020). Investments and reserves represent funds allocated for future claims and contingencies, with efficient management ensuring long-term sustainability (Kothari & Warner, 2021). Technical reserves, encompassing provisions for unexpired risks, incurred claims, and actuarial liabilities, are crucial for meeting policyholder obligations (IRDAI, 2023). The debt-to-equity ratio measures the proportion of liabilities to equity, highlighting financial leverage and risk exposure (Reddy et al., 2022). Net worth, the excess of total assets over total liabilities, underscores the financial robustness of the company, while reinsurance payables represent amounts owed to reinsurers, with efficient reinsurance arrangements mitigating risks and maintaining liquidity(IRDAI, 2023).

Income Statement

The income statement is a critical financial document that provides insights into the profitability and operational efficiency of health insurance companies over a specific period. It details revenues, expenses, and net income, serving as a measure of financial performance and growth potential. For health insurers, revenue sources typically include premiums earned, investment income, and reinsurance recoveries, while expenses consist of claims incurred, operational costs, commissions, and policyholder benefits. A thorough analysis of the income statement reveals trends in underwriting profitability, expense management, and the overall financial viability of the company. By examining key metrics such as the underwriting result, combined ratio, and net profit margin, stakeholders can assess the insurer's ability to generate sustainable earnings and manage costs effectively. This evaluation is essential for understanding the company's capacity to meet policyholder obligations and achieve long-term profitability (Pandey, 2020; IRDAI, 2023).

Cash Flow Statement

The cash flow statement is a vital financial document that provides an overview of a company's cash inflows and outflows during a specific period, categorized into operating, investing, and financing activities. For health insurance companies, this statement is particularly important for assessing liquidity, operational efficiency, and financial sustainability. Operating cash flows primarily include premiums received, claims paid, and operational expenses, offering insights into the company's core business performance. Investing cash flows reflect changes in investment portfolios, such as purchases or sales of securities, which are crucial for generating returns and maintaining reserves. Financing cash flows, on the other hand, involve activities such as equity infusions or dividend payments, indicating how the company manages its capital structure. Analyzing the cash flow statement helps stakeholders evaluate the insurer's ability to generate sufficient cash to meet short-term obligations, fund growth, and ensure long-term solvency. A positive and stable cash flow position underscores operational robustness and financial resilience, making it a critical tool for assessing overall performance (Pandey, 2020; IRDAI, 2023).

Financial Measures:

Financial measures are fundamental for assessing the operational efficiency, stability, and profitability of health insurance companies. These measures serve as diagnostic tools,

allowing stakeholders to evaluate performance across various dimensions, identify areas of improvement, and benchmark against industry standards. The evaluation is conducted using a combination of traditional financial performance indicators and the comprehensive **CARAMEL framework**, which delves into specific aspects critical to the financial health of insurance companies.

Traditional Financial Performance Parameters

Traditional parameters are straightforward metrics that offer a snapshot of the insurer's financial health and business efficiency:

1. **Gross Direct Premium Growth**:
   This metric reflects the company's ability to expand its customer base and increase its market share. Growth in gross premiums indicates an increase in policies sold, market penetration, and overall revenue.
2. **Net Earned Premium Growth**:
   Represents the actual premiums retained after accounting for reinsurance and policy cancellations. It highlights the company's ability to generate revenue directly from its underwriting activities.
3. **Income from Investments**:
   A significant portion of an insurer's income is derived from investments. This metric measures the return generated on reserves and surplus funds, which is critical for covering claims and ensuring profitability.
4. **Profit After Tax (PAT)**:
   PAT represents the net income earned after all expenses, taxes, and claims. It is a direct indicator of the company's overall profitability and operational efficiency.
5. **Net Claims Incurred**:
   This parameter evaluates the company's ability to manage its claims obligations efficiently. Lower claims incurred relative to premiums earned reflect better risk assessment and underwriting practices.

CARAMEL Framework-Based Financial Measures

The **CARAMEL model** (Capital Adequacy, Asset Quality, Reinsurance, Management Soundness, Earnings and Profitability, and Liquidity) provides a systematic approach to analyzing the financial health of health insurance companies. Each component is assessed using specific ratios to ensure comprehensive coverage:

1. **Capital Adequacy**:

   Capital adequacy is a critical measure of an insurance company's financial stability and resilience. It assesses the insurer's ability to absorb potential losses, maintain solvency, and meet its long-term obligations. For health insurance companies, capital adequacy is vital due to the inherent risks associated with underwriting, fluctuating claims, and regulatory compliance requirements. Adequate capitalization ensures that the company can withstand financial shocks, support business expansion, and instill confidence among stakeholders.

   - **Net Premium/Capital**: This ratio evaluates the relationship between net premiums earned and the capital base. It indicates the extent to which the company's underwriting activities are supported by its capital. A lower ratio suggests a conservative approach to risk and greater financial stability, while a higher ratio may signal aggressive underwriting practices.
   - **Capital/Total Assets**: This ratio measures the proportion of the company's total assets financed by shareholder equity. A higher ratio reflects a stronger capital base relative to the asset size, indicating the company's capacity to absorb losses without jeopardizing its solvency.

     The **Insurance Regulatory and Development Authority of India (IRDAI)** mandates a **Solvency Margin** requirement to ensure the capital adequacy of insurance companies operating in India. The **standard rate of capital adequacy**, expressed as the **Solvency Ratio**, is set at a minimum of **1.50 times** (150%) of the Required Solvency Margin (RSM).

Purpose of Capital Adequacy Standards by IRDAI

- **Policyholder Protection**: Ensures that insurance companies have adequate capital to honor claims.
- **Risk Mitigation**: Encourages insurers to maintain sufficient reserves to withstand adverse events.
- **Financial Stability**: Helps safeguard the overall health of the insurance sector by minimizing systemic risks.
- **Regulatory Compliance**: Aligns with global standards, including recommendations from the International Association of Insurance Supervisors (IAIS).

2. **Asset Quality**:

   Asset quality is a crucial dimension in assessing the financial performance and stability of health insurance companies. It reflects the risk and reliability of the assets held by the insurer, particularly the investment portfolio, and directly impacts the company's ability to meet its liabilities and sustain profitability. Ensuring high asset quality is essential for maintaining financial stability and protecting policyholder interests.

   - **Equities/Total Assets**: Indicates the risk exposure in the company's investment portfolio. Higher equity holdings may increase returns but also carry higher risks, requiring careful management.

3. **Reinsurance and Actuarial Issues**:

   Reinsurance and actuarial practices are vital components of the financial performance and risk management framework for health insurance companies. Reinsurance helps insurers manage large or unpredictable risks, while actuarial assessments ensure that reserves and premiums are calculated accurately to meet future obligations. Together, they strengthen the financial resilience of insurers and safeguard policyholder interests.

   - **Net Premiums/Gross Premiums**: This ratio shows the company's reliance on reinsurance. A higher ratio implies better risk retention.

- **Net Technical Reserves/Average of Net Claims in the Last Three Years**: Ensures that adequate reserves are maintained for future claims, emphasizing prudent actuarial practices.

4. **Management Soundness**:

Management soundness is a critical parameter in evaluating the operational efficiency and strategic decision-making capabilities of health insurance companies. It assesses how effectively the management team utilizes resources, controls operational costs, and ensures profitability while maintaining high service standards and regulatory compliance. Strong management soundness reflects the company's ability to achieve sustainable growth and adapt to market dynamics.

- **Operational Expenses/Gross Premiums**: Evaluates the efficiency of operational management. Lower ratios indicate better cost control relative to revenue.

5. **Earnings and Profitability**:

Earnings and profitability are central to assessing the financial success and sustainability of health insurance companies. These metrics reflect the company's ability to generate income from its core operations, manage costs efficiently, and deliver value to stakeholders, including shareholders and policyholders. Strong earnings and profitability indicate a well-managed company that can reinvest in growth, enhance customer offerings, and maintain financial stability over time.

- **Loss Ratio (Net Claims/Net Premiums)**: This ratio measures the percentage of premiums that are spent on paying claims. A high loss ratio indicates that the company is paying out a significant portion of its premiums in claims, which could impact profitability. A lower ratio suggests better underwriting practices and greater profitability.
- **Expense Ratio (Expenses/Net Premiums)**: Reflects the operational efficiency of the company by comparing operational expenses to the premiums earned. A lower expense ratio indicates better cost management, while a higher ratio can signal inefficiencies.
- **Combined Ratio (Loss Ratio + Expense Ratio)**: The combined ratio provides a comprehensive view of the insurer's overall profitability by adding

the loss ratio and expense ratio. A ratio below 100% indicates profitability, meaning the company is making underwriting profits (net of claims and expenses), while a ratio above 100% suggests underwriting losses.

- **Investment Income Ratio (Investment Income/Net Premium)**: This ratio measures the income generated from investments relative to the net premiums earned. It highlights the effectiveness of the insurer's investment strategies in supplementing its core insurance business.

- **Return on Equity (PAT/Equity)**: ROE is a key profitability measure that indicates how efficiently a company is using its equity to generate profit. A higher ROE indicates strong profitability and effective use of shareholder capital.

6. **Liquidity**:

   Liquidity is a fundamental financial measure that reflects the ability of a health insurance company to meet its short-term obligations without compromising its financial stability. It assesses whether the company has enough liquid assets (easily convertible to cash) to pay claims, administrative costs, and other liabilities as they become due. Maintaining a strong liquidity position is essential for insurers to manage operational cash flows and ensure prompt settlement of claims, which directly impacts policyholder trust and the company's overall reputation.

   - **Liquid Assets/Liquid Liabilities**: This ratio indicates the proportion of the company's liquid assets (such as cash and easily marketable securities) relative to its liquid liabilities (such as short-term debt, claims payable, and other immediate financial obligations). A liquidity ratio above 1.0 suggests that the company has sufficient liquid assets to cover its liabilities, while a ratio below 1.0 may indicate potential liquidity shortfalls.

Conceptual Framework for Health Insurance Policyholders' Perception

The conceptual framework for assessing health insurance policyholders' perception is structured to explore the various factors that shape policyholders' views, attitudes, and satisfaction levels with health insurance products and services. The framework aims to identify key determinants that influence policyholder perceptions and understand the relationship between these factors and overall satisfaction. This framework can be applied to

evaluate health insurance companies, helping to assess consumer trust, brand loyalty, and areas requiring improvements in services or products.

The key components of the conceptual framework include the following dimensions:

General Perception:

General perception encompasses policyholders' overall impressions and trust in the health insurance company. It reflects the subjective evaluation of the insurer's reputation, reliability, and ability to fulfill healthcare needs (Lovelock & Wirtz, 2016). Positive brand reputation, driven by effective communication and consistent service delivery, significantly enhances policyholders' trust and perception (Zeithaml et al., 1996).

General Understanding:

The clarity and accessibility of information regarding policy terms, conditions, and benefits are critical. Policyholders with a thorough understanding of their insurance plan are more likely to perceive value and express satisfaction (Chatterjee et al., 2020). Insurers that provide transparent and simplified communication foster greater trust and loyalty among their customers (Siddiqui & Sharma, 2010).

Coverage and Benefits:

Adequacy of coverage, including inclusions, exclusions, and additional benefits such as wellness programs, significantly impacts policyholder satisfaction. Comprehensive coverage tailored to individual healthcare needs strengthens customer loyalty and perceived value (Gupta & Aggarwal, 2022). The perceived adequacy of benefits is a critical determinant of whether policyholders view their insurance as a worthwhile investment.

Claim Process:

The efficiency, transparency, and fairness of the claims process are pivotal in shaping policyholders' perceptions. A seamless claims process positively impacts customer satisfaction, while delays, denials, or excessive documentation requirements can erode trust (Jain & Singh, 2021). Customer support during the claims process also plays a vital role in enhancing the overall experience.

Renewal and Policy Changes:

Policyholders value flexibility and ease during the renewal process, including automated reminders and the ability to customize plans based on changing needs. Insurers that simplify renewals and accommodate modifications create a more positive perception, contributing to customer retention (Kumar et al., 2019).

Customer Service and Support:

The quality of customer service is a critical touchpoint for policyholders. Responsive, professional, and empathetic customer service strengthens the relationship between the insurer and the policyholder (Parasuraman et al., 1988). Effective support systems enhance satisfaction by addressing concerns promptly and efficiently.

Overall Satisfaction:

Overall satisfaction integrates the effects of all dimensions, reflecting how well the insurer meets the expectations and needs of policyholders. Satisfied customers are more likely to renew their policies and recommend the company to others (Oliver, 1999). High satisfaction levels also serve as a competitive advantage in retaining customers in a highly dynamic health insurance market.

REVIEW OF LITERATURE

Numerous research studies have been conducted on financial management aspects all over the globe by researchers, academicians and organizations. An attempt is made in the following paragraphs to review the literature on financial performance of health insurance with different financial management aspect. Reviews gathered for current study fall under followings-

- Literature review on Insurance Industry
- Literature review on Financial Performance
- Literature review on Financial Performance of Insurance Industry

(KetanPopat 2014) The study assessing the financial soundness and liquidity of selected non-life insurers in India analyzed the top four companies from both the public and private sectors. Using secondary data sources, the study covered a period of seven years (2005-06 to 2011-12) and employed ratio analysis, F-test, and one-way ANOVA for evaluation. Findings revealed that the return on net worth for public sector non-life insurers was around 10%, whereas private sector companies had a higher return of approximately 20%. However, the liquidity ratio, which should ideally be 200%, was found to be below 100% for companies in both sectors, indicating poor liquidity. Overall, the performance of these insurers was deemed average when compared to standard industry benchmarks.

(NikolinaSmajla 2014) The study explored the CARAMELS model as a recent analytical tool for assessing the financial soundness of insurance companies, focusing on Croatian insurers. It highlighted that the existing regulatory and control methods used in Croatia differ from the CARAMELS model, providing an alternative perspective on the financial stability of the country's insurance sector.

(Dar and Thaku 2015) applied the CARAMEL model to assess the financial soundness of leading general insurance companies in India's public and private sectors, focusing on earnings and profitability, management soundness, and liquidity. Using ratio analysis and statistical tools like mean, standard deviation, and F-test, the study found significant differences in liquidity ratios for public insurers, while private insurers showed more uniformity but lacked high liquidity. Public insurers displayed less variability, whereas private

insurers exhibited higher variation in financial performance. In terms of earnings and profitability, public insurers had relatively uniform ratios, whereas private insurers showed significant differences. The findings highlight structural disparities between the two sectors and underline liquidity concerns across both.

(Jayalakshmi 2016) assessed the financial results of a few Indian governmental and commercial health insurance providers. The study found no significant differences between New India Assurance and United India Insurance Regarding the gross premium earnings, net premium earnings, spread, and profit after tax, although investment income varied significantly, with New India Assurance holding a consistently higher market share. Among private companies, ICICI Lombard and Bajaj Allianz also showed no significant differences in key financial metrics except for the incurred claims ratio. Additionally, the study observed that public sector companies experienced positive growth in gross premium earnings initially, followed by a decline. The study also highlighted that 88.71% of policyholders viewed health insurance positively, with a preference for public sector insurers (64.24%) over private (25.4%) and standalone companies (10.2%), indicating a stronger trust in public companies.

(Gonga and SitumaSasaka 2017) investigated the determinants of financial performance of selected insurance firms in Nairobi County and found that firms relied on liquid investments to settle claims when underwriting income was insufficient. Many insurers managed liquidity through cash flow from operations, ensuring a steady source of funds. The study recommended that insurance firms establish a well-matched asset and liability portfolio in terms of cash flows and create additional reserves to mitigate discrepancies caused by low interest rates, which could impact earnings.

(Salim 2018) examined the financial performance of insurance companies in Bangladesh from 1983 to 2012, analyzing profitability measures before, during, and after financial liberalization. The study found that financial reform had no significant effect on return on assets (ROA) or return on equity (ROE), though net interest margin (NIM) increased. It emphasized the importance of maintaining capital and assets through reliable policies as key drivers of profitability. However, the study's focus was limited to assessing the effects of financial liberalization.

(Batool and Sahi 2019) conducted a comparative analysis of the financial performance of insurance industries in the USA and UK, particularly during the global financial crisis. Using quarterly data from 24 insurance companies between 2007 and 2016, the study applied panel data techniques to examine the impact of internal factors (firm size, liquidity, leverage, and asset turnover) and external factors (GDP, CPI, interest rate, and WTI) on profitability indicators (ROA and ROE). The findings revealed that in the USA, firm size, liquidity, leverage, asset turnover, GDP, and WTI positively influenced profitability, while CPI and interest rate had a negative impact. In the UK, firm size, liquidity, GDP, CPI, and WTI positively influenced profitability, whereas leverage, asset turnover, and interest rate had a negative effect. The study concluded that the US insurance industry exhibited greater efficiency compared to the UK.

(SASIDHARAN et al., 2020) suggested through their research that there is many variables determining financial performance i.e. firm's age, retention ratio, capital adequacy, underwriting risk/loss ratio, financial leverage, reinsurance dependency, and macro –economic factors such as GDP per capita, inflation rate considered as independent factors. The return on Asset (ROA) is the key measuring indicator it is regarded as the dependent variable for financial performance measures. The study targeted 18 insurance companies listed on the UAE stock exchanges, and examines the overall factors that influence the financial performance of an insurance company.

(Ray et al., 2020)in their study "India's insurance sector: challenges and opportunities" The report looked at the Indian insurance industry and traced its evolution and growth, as well as identifying the significant difficulties it faces. Low penetration and density rates, less investment in insurance products, the dominant position of public sector insurers, and their worsening financial health are only a few of the issues that the sector faces, as stated in the report.

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(Dutta, 2020) in his article titled "Health insurance sector in India: an analysis of its performance" opined that Earned premium and underwriting loss have a considerable relationship. Premium earnings have risen, yet instead of creating profit for the industry, they have increased underwriting loss over time. Despite the fact that the sector's earnings are expanding at a compounded annual growth rate of 27%, it is still unable to make an underwriting profit.

(Farooq & Kugler, 2022) in their study on Customer's Choice of Health Insurance: A Comparative Study of Public and Private Sector Insurers" opined that Earned premium and underwriting loss have a considerable relationship. Premium earnings have risen, yet instead of creating profit for the industry, they have increased underwriting loss over time. Despite the fact that the sector's earnings are expanding at a compounded annual growth rate of 27%, it is still unable to make an underwriting profit. Methodology used for the research is regression analysis to establish relationship between profit/loss and health insurance premium earned.

SUMMARY OF THE REVIEW OF LITERATURE AND RESEARCH GAP

From the literature review, it is observed that several studies have been conducted considering the financial results of life and non-life insurance companies at the national and international level. However, in India, majority of the studies in insurance have been confined to the financial performance of life insurance sector, comparative study on life and general insurance companies, policy holder perception, some of the studies have been done on financial performance of general insurance sector in India and There are very less research conducted to evaluate the performance of stand-alone health insurance companies in India. Some of the studies they considered health insurance business of the general insurance companies and Life insurance companies.

There is a lack of comprehensive research that integrates both quantitative financial analysis and qualitative assessment of policy holders' perception towards stand-alone health insurance. This is the research gap. Therefore, the study 'financial performance of select health insurance companies in India' is a humble attempt to fill this research gap.

The proposed research intends to bridge this research gap by conducting a comprehensive financial performance analysis of select health insurance companies in India. The study will employ a mixed-method approach, combining quantitative ratio analysis of stand-alone health insurance companies with qualitative assessment of policy holders' perception towards health insurance products and services. By providing insights into the financial health and competitive positioning of health insurance companies, the research aims to contribute to the existing literature and guide stakeholders in the industry.

STATEMENT OF RESEARCH PROBLEM

Wealth maximization is the most widely accepted objective of all the firms in the world. Day by day technologies are improving and along with that pollution is also increasing adversely affecting human health, especially for those living below the poverty line but they have not been able to pay the premium to protect their health. If the health insurance companies evaluate their financial performance they can know if the insurance premiums can be reduced to make them affordable to the people at the bottom of the pyramid. Hence an analysis of the financial performance of the health insurance companies will be beneficial for them, to enhance their business systematically. The majority of the rural population in India is not aware of the benefits of health insurance. Moreover, Analyzing the solvency positions of these companies essential to understand their capacity to meet long-term financial obligations and unforeseen challenges. And also Exploring the correlation between financial performance and customer satisfaction in the health insurance sector. Further to analyzing the impact of customer retention strategies on the long-term financial success of health insurance companies is the challenge. This study will help to identify all these problems and offer solutions for the same.

NEED FOR THE STUDY

Assessing the financial performance of health insurance companies is crucial for understanding the overall health and stability of the insurance industry in India. This information can be valuable for stakeholders, policymakers, and investors. It provides insights

into market trends, competitive dynamics, and the relative strengths and weaknesses of different players. This can help in understanding the market structure and competitiveness within the health insurance sector. Insurance involves managing various risks, and evaluating the financial performance of companies in the sector can help in assessing their risk management practices. This is particularly important in the context of health insurance, where the nature of risks can be unique and challenging. This allows for an examination of how well these companies are meeting the needs of their policyholders. This includes assessing the ability to settle claims promptly, provide comprehensive coverage, and offer competitive premiums. The financial analysis can also shed light on how well health insurance companies adhere to regulatory requirements. This is essential for ensuring that these companies operate in a manner that is fair, transparent, and compliant with industry regulations. Investors, whether individual or institutional, may use financial performance analysis to make informed decisions about investing in health insurance companies. Understanding the financial health of these companies is crucial for assessing the potential returns and risks associated with such investments.

SCOPE OF THE STUDY

The present study covers financial performance of five stand-alone health insurance (Star Health & Allied Insurance Co. Ltd, Care health insurance Ltd, Niva Bupa Health Insurance Co. Ltd, Aditya Birla Health Insurance Co. Ltd, Manipal Cigna health insurance co. Ltd) companies in India. The study period of seven years ranging from 2015-16 to 2021-22. Further the primary data has been collected from health insurance policyholders from Dakshina Kannada District. Hence scope of the study is restricted to analysis of financial performance of stand-alone health insurance companies and analyze the perception of health insurance policy holders.

RESEARCH OBJECTIVES

1. To know the various types of health insurance products available in India.
2. To evaluate the financial performance of the stand-alone health insurance companies in India.
3. To analyze the perception of the health insurance policyholders.
4. To provide pragmatic suggestions to leverage the financial performance of select health insurance companies.

RESEARCH HYPOTHESIS

(H_1-1): There is a significant difference in Gross Written Premium, Net Written Premium, spread between GWP & NWP, Net Profit, Investment Income, Net Incurred claims among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period. (Total Sub Hypothesis-6)

(H_1-2): There is a significant difference in Financial Ratios (CARAMEL) among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period. (Total Sub Hypothesis-12)

(H_1-3): There is a statistically significant difference in sample means of Male and Female of health insurance policy holders in their Overall Perception towards health insurance.

(H_1-4): There is a statistically significant difference in sample means of Age Group of health insurance policy holders in their Overall Perception towards health insurance.

(H_1-5): There is a statistically significant difference in sample means of Marital Status of health insurance policy holders in their Overall perception towards health insurance.

(H_1-6): There is a statistically significant difference in sample means of Educational Qualification of health insurance policy holders in their Overall Perception towards health insurance.

(H_1-7): There is a statistically significant difference in sample means of Residential Status of health insurance policy holders in their Overall Perception towards health insurance.

(H_1-8): There is a statistically significant difference in sample means of Type of Family of health insurance policy holders in their Overall perception towards health insurance.

(H_1-9): There is a statistically significant difference in sample means of Annual Family Income of health insurance policy holders in their Overall Perception towards health insurance.

(H_1-10): The General Understanding of policyholder towards health insurance is significantly related to their General Perception.

(H_1-11): There is a significant impact of Service Attributes by health insurance policyholders on their Overall Satisfaction.

(H_1-12): There is a significant association between Gender and the Satisfaction of health insurance policyholders.

RESEARCH DESIGN AND RESEARCH METHODOLOGY

The present study is analytical, empirical and descriptive in nature. It is executed using the published data of select health insurance companies and perspective of the policy holder from structured questionnaire. The study based both primary, as well as secondary data.

SOURCE OF DATA

For this study, both primary, as well as secondary data, shall be used. The primary data shall be collected through a well-structured questionnaire. The relevant secondary data shall be collected from the Annual Reports of insurance companies. The data for the health insurance industry shall be obtained from a database that has been supplemented with information from various financial dailies, business magazines, reports of the companies, websites, and so on. Editing, classification, and tabulation of the financial data collected from the above-mentioned sources shall be done as per the requirement of the study.

A. SECONDARY DATA:

SELECTION OF SAMPLE

There are 28 health insurance companies in India, out of which 5 companies are stand-alone health insurance provider, in order to examine the financial performance of health insurance companies, the data were collected from five stand-alone health insurance companies. The analysis is based on the data relating to financial performance of the following select stand-alone health insurance companies only.

Table 1: List of Sample Companies

Sl. No.	Company Name	Code
1	Star Health & Allied Insurance Co. Ltd	Star
2	Care Health Insurance Ltd	Care
3	Niva Bupa Health Insurance Co. Ltd	Niva
4	Aditya Birla Health Insurance Co. Ltd	Aditya
5	Manipal Cigna Health Insurance Co. Ltd	Manipal

Table 2: FINANCIAL PERFORMANCE PARAMETERS (Traditional approach)

	Financial Performance
1	Gross Direct Premium Growth
2	Net Earned Premium Growth
3	Income from Investments
4	Profit After Tax
5	Net Claim Incurred

The evaluation of company performance is conducted at two levels. First, the overall performance of companies is assessed based on their financial efficiency. Second, the performance of stand-alone health insurance companies is analyzed using the CARAMEL parameters, as recommended by the International Bank for Reconstruction and Development (World Bank) and the International Monetary Fund. These parameters are outlined in the Financial Sector Assessment Handbook (2005), which provides methodologies, techniques, and approaches for evaluating financial systems, drawing from insights gained through the Financial Sector Assessment Program (FSAP). The CARAMEL framework utilizes specific financial ratios to measure each parameter.

Table 3: CARAMEL MODEL

	Performance Indicators	**Ratios**
1	Capital Adequacy	1.Net Premium/Capital
		2.Capital / Total Assets
2	Asset Quality	1.Equities / Total Assets
3	Reinsurance and Actuarial Issues	1.Net Premiums / Gross Premiums
		2.Net Technical Reserves /Average of Net Claims in last three years

4	Management Soundness	1.Operational Expenses / Gross Premiums
5	Earnings and Profitability	1.Loss Ratio = Net Claims / Net Premiums
		2.Expense Ratio = Expenses / Net Premiums
		3.Combined Ratio = Loss Ratio + Expense Ratio
		4.Investment Income / Net Premium
		5.Return on Equity = PAT/ Equity
6	Liquidity	1.Liquidity = Liquid Assets / Liquid Liabilities

B. PRIMARY DATA:

Primary data collected from the health insurance policy holders in the study area (Dakshina Kannada District) using structured questionnaire.

Universe: According to the census data 2011, the expected population in the Dakshina kannada district of the state of the Karnataka in the year 2021 is 22,60,000. As per IRDAI annual report 2020-21 non- life policy holders' penetration is 1% hence the study population is 22,600.

Sample Size: the sample size for the study is 394 respondents from 5 Taluks of Dakshina Kannada District. This sample size had been selected because, the ideal sample size for the population under question, (health insurance policy holders in Dakshina Kannada District whose population is approximately 22,600 as per for the IRDAI 2020-21 annual report) turns out to be 393.04. data were collected from 415 respondents and after scrutiny, 394 of them were selected. The sample size was calculated by applying the Slovin's formula.

$$\mathbf{n= N/(1+Ne^2)}$$

where,

n= Number of sample

N= Total population and

E= Error tolerance (Sampling error of 5% or 0.05)

$$n=\frac{22600}{(1+22600*0.05^2)}$$

n= 393.04

So, sample size is considered 394.

Sampling Technique:

For the purpose of this investigation, stratified proportionate sampling was employed.

Table 1.2 Sample Proportionate representation

Taluks	**Proportionate representation**	
Bantwal	$n_h = n * \frac{N_k}{N}$ 394* $\frac{4276}{22600}$	75
Belthangady	$n_h = n * \frac{N_k}{N}$ 394* $\frac{2883}{22600}$	50
Mangalore	$n_h = n * \frac{N_k}{N}$ 394* $\frac{10757}{22600}$	188
Puttur	$n_h = n * \frac{N_k}{N}$ 394* $\frac{3113}{22600}$	54
Sullia	$n_h = n * \frac{N_k}{N}$ 394* $\frac{1571}{22600}$	27
Total		394

DATA ANALYSIS

For this study, most of the data come from secondary sources. Data has been collected in raw form and then made suitable for analysis per the methodology defined for the purpose. A questionnaire was chosen as the tool for data collection as primary data was used to fulfil only one objective.

STATISTICAL TOOLS USED

The following statistical tools are used for analysing data collected and testing the hypothesis. For descriptive analysis, (i) Ratio analysis. (ii) Arithmetic Mean (X) (iii) Co-efficient of variations (CV) (iv) Compound annual growth rate (CAGR). For inferential analysis parametric test are used (i) T-test (ii) Chi-Square Test and Fisher's exact test (iii) Analysis of Variance (ANOVA) (iv) Pearson coefficient of correlation and (v) Multiple linear regression

RELIABILITY ANALYSIS

The reliability analysis is tested using the alpha (Cronbach's) method. A reliability coefficient of 0.7 or greater is generally considered reliable in the literature. When the reliability coefficient is 0.7 or greater, it is concluded that the data collected by the researcher is reliable and can be used for further analysis. Cronbach's alpha reliability coefficient was calculated for the respondent's response to all the questions on the Likert Scale under various categories in the questionnaire. General Understanding (0.885), General Perception (0.861), Coverage Benefits (0.908), Claim Process (0.934), Renewal Policy Changes (0.898), Customer Service and Support (0.899), Overall Satisfaction (0.958). The overall reliability coefficient turned out to be 0.906. Therefore, it indicates that the opinions given by the respondents in the form of scales are reliable.

PERIOD OF THE STUDY

The period selected for this study spans seven financial years, from 2015-16 to 2021-22. This timeframe provides a comprehensive view of the financial performance of standalone health insurance companies in India. By covering these seven years, the study captures the effects of various economic, and market changes on the insurance sector, including the implementation of significant policy reforms and the impact of external factors such as the COVID-19 pandemic. This period allows for the analysis of trends and patterns in financial performance, offering insights into the resilience and adaptability of standalone health insurance companies in a dynamic environment.

SIGNIFICANCE OF THE STUDY

This study holds significant importance as it impacts all key stakeholders in the insurance industry, including regulators, insurance companies, and policyholders. It aims to assess the viability of health insurance companies under various models to guide regulatory interventions and policy decisions. For individuals, health insurance acts as a financial safeguard, reducing economic burdens. For health insurance providers, increasing competition and rising claims present challenges to sustainability and profitability. From an academic standpoint, evaluating the performance of the health insurance sector is equally crucial. Therefore, the present study, "Financial Performance Analysis of Select Health Insurance Companies in India," is highly relevant.

LIMITATIONS OF THE STUDY

The study, on the financial performance analysis of select health insurance companies in India is subject to certain limitations. The temporal scope is restricted to specific years, potentially missing long-term trends or the impact of recent developments. Subjectivity in selecting financial ratios and the CARAMEL model parameters, along with the exclusion of external factors like macroeconomic conditions, further constrains the analysis. Primary data on policyholders' perceptions may suffer from biases and limited geographic representation.

Chapter Scheme

The theses will be structured in six chapters; the description of each of the chapter is as follows;

Chapter 1: Introduction

This chapter is an introductory chapter and will contain introduction to the study along with definitions, importance and limitations of financial performance analysis, statement of research problem, need for the study, scope of the study., objectives of the study, hypothesis, research methodology, and the chapter scheme.

Chapter 2: Review of Literature

This chapter includes review of literature on insurance industry, overall financial performance and financial performance of insurance industry. and also, it includes research gap and conceptual framework.

Chapter 3: Health Insurance Products and Profile of the Companies

This chapter will discuss the Evolution of health insurance in India and Overview of health insurance Schemes and present the profile of the stand-alone health insurance companies.

Chapter 4: Financial Performance of Stand-Alone Health Insurance Companies in India

This chapter will cover financial performance of Stand-alone health insurance companies in India using Traditional approach and CARAMEL model.

Chapter 5: Analyze Perception of Health Insurance Policyholders

This chapter will cover the analyze perception of health insurance policyholders on health insurance products and services.

Chapter 6: Summary of Findings, Suggestions and Conclusion.

This chapter will provides summary of the research findings, suggestions, conclusions and scope for further research.

MAJOR FINDINGS OF THE STUDY

Findings of insurance products available in India

1. Before the liberalization of the insurance sector, health insurance in India was dominated by public sector companies and offered basic policies with limited coverage. There was minimal awareness among the population about the importance of health insurance, resulting in a reliance on personal savings for medical expenses. The regulatory framework was underdeveloped, and employer-provided group health insurance plans were the primary source of coverage for a section of the population.

2. The liberalization of the insurance sector in the early 2000s, marked by the establishment of the Insurance Regulatory and Development Authority of India (IRDAI), led to the entry of private players. This brought competition, product innovation, and increased consumer awareness. The introduction of portability, along with government-backed health schemes like RSBY and AB-PMJAY, further enhanced accessibility and affordability. These developments significantly diversified the health insurance sector, benefitting a wider spectrum of the population.

3. Comprehensive health insurance plans introduced a wide range of benefits beyond basic hospitalization coverage, such as outpatient services, maternity care, critical illness protection, mental health coverage, and wellness benefits. These features cater to the diverse healthcare needs of policyholders, emphasizing preventive care, chronic disease management, and family-inclusive policies. The availability of riders and international coverage further highlights the sector's focus on customization and global adaptability.

4. The implementation of health insurance portability empowered policyholders by allowing them to switch insurers without losing accrued benefits like no-claim bonuses and waiting period credits. This initiative promoted transparency, competition, and improved service quality in the health insurance industry. It ensured policy continuity and encouraged consumers to make informed choices, thereby enhancing their trust and satisfaction with the health insurance ecosystem.

5. Government-backed schemes such as Ayushman Bharat (AB-PMJAY), Rashtriya Swasthya Bima Yojana (RSBY), and Employee State Insurance Scheme (ESIS) significantly expanded the reach of health insurance to economically disadvantaged

populations. These programs provided financial protection and access to healthcare for millions, addressing inequalities in healthcare accessibility and affordability.

6. The collaboration between public and private sectors through initiatives like Ayushman Bharat and state-specific schemes leveraged the strengths of both, combining government outreach with private sector efficiency. This synergy facilitated the scaling of health insurance services, ensuring a broader demographic and geographic reach.

7. The adoption of digital technologies in health insurance has significantly transformed policy management, sales, and servicing. Consumers now enjoy the convenience of online policy purchases, instant issuance, real-time claim tracking, and secure payments. Features such as premium calculators, online renewal reminders, telemedicine services, and mobile apps have enhanced transparency, accessibility, and customer satisfaction while streamlining operational efficiency.

8. The evolution of health insurance in India is marked by ongoing efforts to address challenges such as affordability, claims settlement delays, lack of transparency, and limited awareness. Concurrently, reforms like policy standardization, digitalization, regulatory oversight, and public-private partnerships have been implemented to improve accessibility, affordability, and trust. These reforms aim to create a more inclusive and transparent health insurance ecosystem, ensuring that the financial burden of healthcare is effectively mitigated for a broader section of the population.

9. The Employees' State Insurance Scheme (ESIS) is implemented in all 36 States and Union Territories in India, providing coverage to 2.13 crore insured family units and benefiting approximately 13 crore individuals. This extensive reach highlights the scheme's critical role in providing healthcare and financial support to employees and their dependents in the organized sector.
10. ESIS has a substantial focus on women's welfare, with 1.6 crore insured women covered under the scheme. This reflects the scheme's emphasis on inclusive healthcare access and financial security for female employees and their dependents.
11. The Central Government Health Scheme (CGHS) and Ayushman Bharat collectively showcase India's commitment to achieving Universal Health Coverage (UHC). CGHS, with its extensive beneficiary base of approximately 42 lakh individuals across 80 cities, ensures comprehensive healthcare for Central Government

employees and pensioners. Complementing this, Ayushman Bharat's creation of 1,50,000 Health and Wellness Centres (HWCs) aims to bring equitable and accessible primary healthcare closer to communities, emphasizing preventive care, maternal and child health, and management of non-communicable diseases. Together, these initiatives represent a holistic and inclusive approach to improving healthcare accessibility and affordability for diverse population segments.

12. The Pradhan Mantri Jan Arogya Yojana (PM-JAY) addresses critical gaps in India's healthcare insurance landscape by providing comprehensive, cashless health coverage of ₹5 lakhs per family per year without restrictions on family size, age, or pre-existing conditions. It ensures equitable access to secondary and tertiary care for over 12 crore economically vulnerable families, reducing catastrophic medical expenses and bridging the limitations of previous schemes like the Rashtriya Swasthya Bima Yojana (RSBY), which had lower coverage ceilings and restrictive family caps.

13. The Rashtriya Swasthya Bima Yojana (RSBY) was a significant initiative aimed at providing financial protection to Below Poverty Line (BPL) families from health-related expenses, offering a health insurance cover of ₹30,000 per family per year on a family floater basis. However, its limited coverage, both in terms of monetary value and family size (capped at five members), highlighted gaps in addressing comprehensive healthcare needs, which were later addressed by its successor, the Pradhan Mantri Jan Arogya Yojana (PM-JAY), with higher coverage and more inclusive provisions.

14. The Aam Aadmi Bima Yojana (AABY) plays a vital role in providing life insurance coverage to economically vulnerable individuals in the unorganized sector, with a focus on the head of the family between 18 and 59 years of age. Despite its affordable premium structure and significant government subsidies, the scheme's coverage is limited in terms of financial protection, excluding those in organized sectors and income taxpayers. This highlights the need for broader social security integration to better serve all segments of the population, especially in the context of increasing economic vulnerabilities.

15. Community-based health insurance schemes, such as those by SEWA, MIA, and Karuna Trust, provide crucial healthcare coverage to vulnerable populations, particularly in the informal and unorganized sectors. These schemes focus on women,

low-income households, and marginalized communities, offering affordable health insurance solutions and addressing gaps in traditional healthcare access.

16. Many of the schemes, such as Janashree Bima Yojana and SEWA Grihini Swasthya Suraksha Scheme, are designed to be affordable, with subsidies provided by the government to lower the financial burden on beneficiaries. The simplicity of enrollment and the wide coverage (including pre-existing conditions) have made these schemes accessible to the rural and low-income populations.

17. Star Health & Allied Insurance offers a comprehensive variety of health insurance plans tailored to meet the specific needs of different groups, including women, senior citizens, rural populations, farmers, and individuals seeking enhanced coverage. Plans like the Women Care Plan**,** Senior Citizens Red Carpet Health Insurance Policy**,** and Micro Rural and Farmers Care Insurance Policy ensure that diverse customer segments have access to affordable and specialized health coverage, addressing specific healthcare needs such as maternity, gynecological conditions, and the challenges faced by rural communities.

18. Most of Star Health's policies, including the **Super Star Health Insurance Plan** and **Comprehensive Plan,** offer extensive coverage options with features such as no room rent limits, pre- and post-hospitalization benefits, daycare treatments, and cashless treatment at a wide network of hospitals. The **Super Surplus Plan and Health Gain Insurance Policy** provide additional financial protection with options to restore the sum insured, making these plans highly flexible and suitable for individuals and families who want to protect themselves against unexpected medical expenses.

19. Max Bupa offers highly flexible and comprehensive health insurance plans that cater to various demographics, from young professionals to families. Plans like the **Aspire Health Insurance Plan** and **ReAssure 2.0 Health Insurance Plan** provide unique features such as unlimited reinstatement of the sum insured, global treatment coverage, and additional benefits for maintaining a healthy lifestyle. Furthermore, the **Premia Health Insurance Plan** offers a substantial sum insured (up to ₹3 crore), loyalty additions, maternity and newborn coverage, and inbuilt travel insurance, making it a highly attractive option for those seeking extensive and customizable health protection.

20. Care Health Insurance provides a variety of tailored plans that address specific healthcare needs across different demographics. Plans such as the **Care Supreme Senior Plan** offer specialized coverage for senior citizens, including benefits like room rent flexibility, wellness rewards, and No Claim Bonus (NCB) for claim-free years. The **Care Freedom Plan** is designed for individuals with pre-existing conditions, providing coverage after a short waiting period. Additionally, the **Care Heart Plan** caters to heart patients, covering treatments like angioplasty and bypass surgery without a waiting period. These plans provide a wide range of flexible, specialized options, ensuring comprehensive and affordable health coverage for individuals at different life stages and with varying medical needs.

21. Aditya Birla Health Insurance offers unique plans that combine health coverage with incentives for maintaining a healthy lifestyle. Plans like the **Activ One NXT** and **Activ Fit Health Insurance Plan** feature the **Health Return** program, where policyholders can earn back up to 100% of their premium for staying healthy. Additionally, the **Activ One VYTL Health Insurance Plan** addresses the needs of individuals with chronic conditions by offering immediate coverage for specific ailments without any waiting period. With features like unlimited sum insured refills, wellness coaching, and modern treatments, Aditya Birla's plans not only provide extensive coverage but also encourage proactive health management, making them a suitable choice for those seeking both financial security and health incentives.

22. Manipal Cigna Health Insurance offers a range of flexible, customizable health insurance plans that cater to diverse healthcare needs and life stages. The **Arogya Sanjeevani Policy** provides affordable coverage with a bonus on the sum insured for claim-free years, while the **ProHealth Insurance Plan** offers a cumulative bonus of up to 200% of the sum insured and coverage for modern treatments. The **Lifetime Health Insurance Plan** stands out for its global coverage options and customizable packages. Notably, the **Sarvah Health Insurance Plan** offers unlimited restoration of the sum insured, critical illness coverage, and maternity benefits. The inclusion of zero waiting periods in **Sarvah Param** ensures immediate coverage, making these plans an ideal choice for individuals and families looking for flexible, long-term protection and additional benefits like maternity coverage, critical illness protection, and bonus accumulation.

Findings of financial performance analysis using Traditional approach

23. Star Health maintained its position as the market leader in gross written premium, starting at ₹2,007.34 crores in 2015-16 and growing to ₹11,463.47 crores by 2021-22. The company achieved a Compound Annual Growth Rate (CAGR) of 28.26%, reflecting consistent and strong market performance.
24. **Care Health Insurance** achieved a **CAGR of 33.88%**, expanding its gross premium from ₹503.32 crores to ₹3,880.91 crores, showcasing rapid growth.
25. **Niva Bupa** exhibited a robust growth trajectory with a **CAGR of 29.03%**, increasing premiums from ₹472.01 crores to ₹2,809.97 crores.
26. The average growth rate of **38.62%** across all companies highlights the strong expansion of the stand-alone health insurance sector during the analysed period.
27. Star Health maintained the highest net premiums throughout the period, showcasing its strong market position and customer trust. Its CAGR of 30.60% highlights steady and consistent growth, reinforcing its leadership in the stand-alone health insurance market.
28. Care Insurance achieved the highest average spread of **44.87%**, indicating a robust retention strategy with a significant portion of gross premiums retained as net premiums. Similarly, Aditya Insurance had a notable average spread of **46.41%**, reflecting its focus on retaining risk and optimizing reinsurance practices.
29. Aditya Birla achieved the highest CAGR of 159.12%, with investment income surging from ₹0.03 crore in 2015-16 to ₹23.53 crore in 2021-22. This extraordinary growth reflects an aggressive capital deployment strategy and rapid market expansion, albeit from a low base.

Findings of financial performance analysis of CARAMEL model

30. The Capital Adequacy Ratio of stand-alone health insurance companies in India, based on the Net Premium to Capital Ratio, shows significant variability, with Star consistently maintaining the highest average (183.01%) and Aditya the lowest (35.08%), while the sector average (89.16%) and standard deviation (62.91) highlight disparities in capital management across companies

31. The Capital Adequacy Ratio of stand-alone health insurance companies in India, based on the Capital to Total Assets Ratio, shows considerable variation, with Manipal recording the highest average (162.39%) and Niva exhibiting the greatest

variability (SD 27.15), while the sector's average (91.64%) and SD (47.59) reflect disparities in capital asset management across companies.

32. Stand-alone health insurance companies in India show significant variability in maintaining capital adequacy, with companies like Star achieving a consistently high average ratio (183.01%) well above regulatory requirements, while others, such as Aditya and Manipal, operate with lower averages (35.08% and 37.19%, respectively), indicating uneven preparedness to meet regulatory standards and unexpected claims.

33. The asset quality of stand-alone health insurance companies in India shows considerable variation, with an overall average of 57.65% and a standard deviation of 35.41%, reflecting disparities in asset management efficiency. Niva records the highest average asset ratio (98.75%) but also the highest variability (SD 30.90%), indicating significant fluctuations in asset quality over the years. In contrast, Star Health demonstrates the most stable and efficient asset management with the lowest average ratio (12.81%) and SD (8.76), suggesting a consistent focus on maintaining asset quality. Overall, the findings highlight that while some companies excel in asset utilization, others experience volatility, necessitating better financial planning and risk management.

34. The industry average reinsurance ratio is 65.69%, indicating that, on average, these companies retain a significant portion of the risk associated with their premiums. The standard deviation across the industry is 14.22, suggesting moderate variability in reinsurance strategies. Companies like Care and Aditya show greater reliance on reinsurers, while Niva Bupa, Manipal Cigna, and Star Health tend to retain a higher share of their premiums, reflecting differing risk appetites and reinsurance strategies across the stand-alone health insurance market.

35. The Actuarial ratio of stand-alone health insurance companies in India averages 173.05% with significant variability (SD 77.79), indicating differences in their ability to maintain sufficient reserves. While Star Health and Niva exhibit consistent reserve management with lower variability (SD 15.95 and 14.36 respectively), companies like Aditya show extreme fluctuations (SD 237.43), highlighting inconsistent financial planning and reserve adequacy.

36. Star Health shows moderate and relatively stable management efficiency, with values ranging from 18.80% to 33.27% and an average of 27.79%.

37. Aditya Birla Health Insurance shows extreme volatility, especially in 2016-17, when the ratio peaked at 621.88%. This reflects very high initial operating expenses, likely due to the company's early operational challenges or heavy investments in distribution and marketing. However, the ratio decreased steadily, reaching 64.96% in 2021-22. Despite this improvement, the average is still 181.41%, with a very high SD of 217.06, indicating that the company's management efficiency has fluctuated dramatically.

38. The loss ratio of stand-alone health insurance companies in India averages 64.70%, with most companies demonstrating stable performance, as indicated by lower variability in firms like Niva (SD 4.23) and Care (SD 5.74). However, Aditya shows significant fluctuation (SD 22.83), reflecting inconsistencies in claims management and underwriting practices. Overall, the sector's performance highlights moderate efficiency in managing claims relative to premiums, though disparities persist across companies.

39. The Combined Ratio of stand-alone health insurance companies in India averages 144.77%, indicating that the sector is generally operating above the breakeven point, with significant variability (SD 73.43) across companies. While Niva demonstrates relatively efficient operations with the lowest variability (SD 6.22) and a consistent average (104.78%), companies like Aditya (average 256.57%, SD 235.63) and Manipal (average 160.78%, SD 74.12) show high ratios and volatility, reflecting challenges in controlling claims and expenses relative to premiums

40. The investment income ratio of stand-alone health insurance companies in India averages 7.50%, with substantial variability (SD 6.50), indicating differences in investment performance across the sector. While Care (average 10.36%, SD 1.53) and Niva (average 8.65%, SD 1.30) maintain steady returns, Aditya exhibits extreme fluctuations (average 11.74%, SD 20.62), reflecting inconsistent investment strategies and portfolio management.

41. The return on equity (ROE) of stand-alone health insurance companies in India demonstrates substantial variability, with an overall negative average of -27.83% and a high standard deviation of 73.98, indicating widespread challenges in generating shareholder value. While Star Health shows extreme fluctuations (average -0.94%, SD 111.58) due to recent losses, companies like Care (average 1.75%, SD 9.68) and

Niva (average -3.27%, SD 5.25) exhibit more consistent but modest performance, reflecting differing levels of financial stability and profitability.

42. The current ratio of stand-alone health insurance companies in India averages 58.24, with considerable variability (SD 15.11), indicating differences in liquidity positions across the sector. While Star Health shows the highest fluctuations (average 124.55, SD 70.16) due to inconsistent liquidity management, other companies like Niva (average 35.91, SD 5.02) and Care (average 31.15, SD 8.62) maintain relatively stable but lower liquidity levels, reflecting more conservative financial practices.

43. **Star Health's** liquidity ratio has shown significant volatility, with a low of 49.21 in 2016-17, a peak of 201.96 in 2017-18, and a sharp drop to 63.57 in 2021-2022. Despite these fluctuations, the average liquidity ratio stands at 124.55, indicating strong liquidity, although the standard deviation (SD) of 70.16 reflects high variability, pointing to inconsistent liquidity management.
44. **Care Health's** liquidity ratio has steadily declined from 43.34 in 2015-16 to 20.34 in 2021-2022, showing a consistent reduction in liquidity over time. The average liquidity ratio is 31.15, with a low SD of 8.62, indicating limited fluctuations but potential concerns regarding liquidity management.
45. **Niva Bupa** has maintained a relatively stable liquidity ratio, ranging from 31.63 in 2016-17 to 44.20 in 2017-18, with an average liquidity ratio of 35.91 and a low SD of 5.02. The consistency of its liquidity position indicates decent liquidity management, though not as strong as Star Health.
46. **Aditya Birla's** liquidity ratio has been quite volatile, ranging from 91.04 in 2015-16 to as low as 28.82 in 2020-21. The average liquidity ratio is 48.34, and with an SD of 23.09, it shows notable variability in its ability to manage short-term financial obligations.
47. **Manipal Cigna**'s liquidity ratio has remained relatively consistent, ranging from a high of 72.67 in 2015-16 to a low of 29.20 in 2018-19. The average liquidity ratio is 51.26, with an SD of 16.42, indicating stability with minor fluctuations, but there is still room for improvement.

Findings of perception of health insurance policyholders

48. the highest proportion of respondents, **47.71%,** are from the Mangalore taluk, indicating that nearly half of the survey participants are concentrated in this area, with significantly fewer respondents from other taluks.

49. All respondents (100%) indicated awareness of life, health, and motor insurance schemes.

50. The majority of respondents (29.7%) cited colleagues as the primary influencer in their decision to purchase health insurance. Friends and insurance agents were also significant influencers for many respondents (22.8% and 21.6%, respectively). Relatives played a role for 18.8% of respondents, while media and neighbours had a smaller influence.

51. All respondents (100%) agreed that health insurance is necessary.

52. The majority of respondents (78.7%) have a family floater health insurance policy, while 21.3% have individual policies.

53. The majority of respondents (53.6%) have filed claims on their health insurance policies, while 46.4% have not.

54. The majority of respondents (46.4%) reported that their health insurance claims were paid, while 7.1% had claims that were not paid.

55. The claim settlement process experience of Among those who did, 22.8% were satisfied and 14.2% were highly satisfied. However, a smaller percentage (11.1%) were either dissatisfied or highly dissatisfied with the process.

56. The majority of respondents (91.6%) did not have any health insurance claims rejected. Among those who did, the most common reason for rejection was policy exclusions (7.1%), followed by false claims (1.3%).

57. claims settled duration among those who claimed, a significant portion (25.4%) had their claims settled within one week. Longer settlement times were less common, with only 4.3% taking more than a month.

58. The majority of respondents (29.9%) believe there are other specific areas that need coverage under their health insurance policies, highlighting a wide range of unmet

needs. Pregnancy-related expenses (20.8%), long-term care (19.0%), out-patient expenses (9.1%), and medical consultancy charges (10.7%) are also significant areas of concern. While drugs, pre-existing conditions, chronic diseases, and disability are less frequently mentioned

General Perception

59. The findings indicate that respondents generally agree that health insurance provides peace of mind, as reflected by a composite mean score of 3.77. They perceive health insurance as an essential part of financial planning (mean: 3.90) and consider the cost of premiums reasonable compared to the benefits offered (mean: 3.84). However, understanding the terms and conditions of health insurance is slightly less straightforward, with a lower mean score of 3.69, suggesting some complexity in policy details.

General Understanding

60. The findings reveal that respondents have a moderate level of general understanding of health insurance, with a composite mean score of 3.55. While they are relatively confident in identifying covered medical services (mean: 3.86), their ability to explain basic coverage (mean: 3.42), differentiate between in-network and out-of-network providers (mean: 3.47), and understand key terms like deductibles and co-pays (mean: 3.45) is somewhat lower. This indicates a need for better communication and education about health insurance policy details.

Coverage and Benefits

61. The findings indicate that respondents are generally satisfied with the coverage and benefits of their health insurance plans, with a composite mean score of 3.81. They express a good understanding of covered benefits and exclusions (mean: 3.88) and are satisfied with the network of hospitals and healthcare providers (mean: 3.80). Additionally, they believe the coverage offered meets their needs (mean: 3.79) and are content with the variety of plans available (mean: 3.78), reflecting overall positive perceptions of coverage adequacy.

Claim Process

62. The findings suggest that respondents have a moderately positive perception of the claim process of their health insurance policies, with a composite mean score of 3.57. They find the insurer helpful in guiding them through the claim process (mean: 3.75) and are satisfied with the adequacy of network hospitals (mean: 3.68). However, the speed of claim settlement (mean: 3.39) and the straightforwardness of the claim process (mean: 3.46) received slightly lower ratings, indicating potential areas for improvement.

Renewal and Policy Changes

63. The findings highlight that respondents generally find the renewal process for health insurance policies satisfactory, with a composite mean score of 3.69. They appreciate the hassle-free renewal process (mean: 3.84) and timely notifications about renewals (mean: 3.89). However, satisfaction with premium rates upon renewal (mean: 3.40) and the ease of making changes or customizing coverage (mean: 3.64 and 3.66, respectively) is slightly lower, indicating scope for enhancing flexibility and affordability

Customer Service and Support

64. The findings indicate that respondents have a favorable view of customer service and support provided by their health insurance providers, with a composite mean score of 3.68. They find it relatively easy to reach customer support through multiple channels (mean: 3.79) and perceive the representatives as knowledgeable and helpful (mean: 3.68). While the availability of easy-to-access service channels (mean: 3.65) and helpful online resources (mean: 3.60) are appreciated, there is some room for improvement in enhancing these aspects further.

Overall Satisfaction

65. The findings show that respondents have a moderately positive level of overall satisfaction with their health insurance, with a composite mean score of 3.62. They agree that having health insurance provides peace of mind (mean: 3.81) and feel that their plans largely meet their overall needs (mean: 3.52). However, the general satisfaction with their current health insurance plan (mean: 3.53) suggests there is room for improvement in tailoring plans to better address customer expectations.

MAJOR FINDINGS ON HYPOTHESIS TESTING:

Alternative Hypothesis (H_1-1): There is a significant difference in Gross Written Premium among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

1. According to Anova test, the p value 0.00 at 5 percent level of significance for 34 degrees of freedom. The alternative hypothesis is accepted and null hypothesis is rejected. It is therefore, concluded that there is a significant difference in the gross written premium earnings between the stand-alone companies.

Alternative Hypothesis (H_1-2): There is a significant difference in net written premium among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

2. Since the p value 0.00 at 5 percent level of significance for 34 degrees of freedom. The alternative hypothesis is accepted and null hypothesis is rejected. It is therefore, concluded that there is a significant difference in the net written premium earnings between the stand-alone companies

Alternative Hypothesis (H_1-3): There is a significant difference in Spread between GWP & NWP among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

3. Since the p value 0.026 at 5 percent level of significance for 34 degrees of freedom. The alternative hypothesis is accepted and null hypothesis is rejected. It is therefore, concluded that there is a significant difference in Spread between GWP & NWP among the stand-alone health insurance companies

Alternative Hypothesis (H_1-4): There is a significant difference in Investment Income among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

4. Since the p value 0.001 at 5 percent level of significance for 34 degrees of freedom. The alternative hypothesis is accepted and null hypothesis is rejected. It is therefore,

concluded that there is a significant difference in Investment Income among the stand-alone health insurance companies.

Alternative Hypothesis (H_1-5): There is a significant difference in Net Profit among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

5. The ANOVA results indicate that there is no statistically significant difference in net profit among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period. The F-value is 0.727, and the p-value is 0.581, which is greater than the significance level of 0.05. As a result, the alternative hypothesis is rejected and null hypothesis is accepted. The null hypothesis, which states that there is no significant difference in net profit among the five companies.

Alternative Hypothesis (H_1-6): There is a significant difference in Net Incurred claims among STAR, CARE, NIVA, ADITYA, and MANIPAL during the study period

6. Since the p value 0.00 at 5 percent level of significance for 34 degrees of freedom. The alternative hypothesis is accepted and null hypothesis is rejected. It is therefore, concluded that there is a significant difference in the Net Incurred claims between the stand-alone companies.

Alternative Hypothesis (**H_1-7**): There is a significant difference in the Capital Adequacy, Asset quality, Reinsurance & Actuarial soundness, Management efficiency, Profitability and Liquidity readiness of the companies.

7. The F-statistic of **26.197** is quite large, and the p-value of **0.000** indicates that the difference in the capital adequacy ratio between the groups (the companies) is statistically significant at the 5% significance level. Hence reject the null hypothesis and conclude that there is a significant difference in the capital adequacy ratios among the different stand-alone health insurance companies in the sample.
8. The ANOVA results reveal a statistically significant difference in the capital adequacy ratios among the stand-alone health insurance companies across the years. The F-value is 51.449, and the p-value is 0.000, which is less than the significance level of 0.05. As a result, the null hypothesis, which states that there is no significant difference in the capital adequacy ratios among the companies, is rejected, and the

alternative hypothesis is accepted. This indicates that the differences in capital adequacy ratios among the selected stand-alone health insurance companies across the years are significant and not due to random variation.

9. The ANOVA results demonstrate a statistically significant difference in the asset quality ratios among the stand-alone health insurance companies across the years. The F-value is 15.669, and the p-value is 0.000, which is less than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the asset quality ratios among the companies, is rejected, and the alternative hypothesis is accepted. This indicates that the variations in asset quality ratios among the selected stand-alone health insurance companies across the years are significant and not due to random chance.
10. The ANOVA results reveal a statistically significant difference in the reinsurance ratios among the stand-alone health insurance companies across the years. The F-value is 6.359, and the p-value is 0.001, which is less than the significance level of 0.05. As a result, the null hypothesis, which states that there is no significant difference in the reinsurance ratios among the companies, is rejected, and the alternative hypothesis is accepted. This indicates that the variations in reinsurance ratios among the selected stand-alone health insurance companies across the years are significant and not due to random variation.
11. The ANOVA results indicate that there is no statistically significant difference in the actuarial issues ratios among the stand-alone health insurance companies across the years. The F-value is 2.042, and the p-value is 0.115, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the actuarial issues ratios among the companies, is accepted, and the alternative hypothesis is rejected. This suggests that the variations in actuarial issues ratios among the selected stand-alone health insurance companies across the years are not statistically significant and could be due to random chance.
12. The ANOVA results indicate that there is no statistically significant difference in the management efficiency ratios among the stand-alone health insurance companies across the years. The F-value is 2.534, and the p-value is 0.062, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the management efficiency ratios among the companies, is accepted, and the alternative hypothesis is rejected. This implies that the variations in management efficiency ratios among the selected stand-alone health insurance

companies across the years are not statistically significant and could be attributed to random variation.

13. The ANOVA results indicate that there is no statistically significant difference in the loss ratios among the stand-alone health insurance companies across the years. The F-value is 2.238, and the p-value is 0.089, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the loss ratios among the companies, is accepted, and the alternative hypothesis is rejected. This suggests that the variations in loss ratios among the selected stand-alone health insurance companies across the years are not statistically significant and may be due to random variation.
14. The ANOVA results indicate that there is no statistically significant difference in the expenses ratios among the stand-alone health insurance companies across the years. The F-value is 2.534, and the p-value is 0.062, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the expenses ratios among the companies, is accepted, and the alternative hypothesis is rejected. This suggests that the variations in expenses ratios among the selected stand-alone health insurance companies across the years are not statistically significant and could be due to random variation.
15. The ANOVA results indicate that there is no statistically significant difference in the combined ratios among the stand-alone health insurance companies across the years. The F-value is 2.524, and the p-value is 0.062, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the combined ratios among the companies, is accepted, and the alternative hypothesis is rejected. This suggests that the variations in combined ratios among the selected stand-alone health insurance companies across the years are not statistically significant and may be due to random fluctuation.
16. The ANOVA results indicate that there is no statistically significant difference in the investment income ratios among the stand-alone health insurance companies across the years. The F-value is 1.631, and the p-value is 0.193, which is greater than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the investment income ratios among the companies, is accepted, and the alternative hypothesis is rejected. This suggests that the variations in investment income ratios among the selected stand-alone health insurance companies

across the years are not statistically significant and could be attributed to random variation.

17. The ANOVA results indicate a statistically significant difference in the return on equity ratios among the stand-alone health insurance companies across the years. The F-value is 3.441, and the p-value is 0.020, which is less than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the return on equity ratios among the companies, is rejected, and the alternative hypothesis is accepted. This suggests that the variations in return on equity ratios among the selected stand-alone health insurance companies across the years are statistically significant.
18. The ANOVA results indicate a statistically significant difference in the current ratios among the stand-alone health insurance companies across the years. The F-value is 8.679, and the p-value is 0.000, which is less than the significance level of 0.05. Therefore, the null hypothesis, which states that there is no significant difference in the current ratios among the companies, is rejected, and the alternative hypothesis is accepted. This suggests that the variations in current ratios among the selected stand-alone health insurance companies across the years are statistically significant and not due to random variation.

Alternative Hypothesis (H_1-8): There is a statistically significant difference in sample means of male and female of health insurance policy holders in their Overall perception towards health insurance

The results of the independent sample t-test revealed that there is a significant mean difference between gender with respect to overall Perception (General Perception, General Understanding, Coverage Benefits, Claim Process, Renewal Policy Changes, Customer Service and Support, Overall Satisfaction). As the p value obtained from the above-mentioned statements are less than 0.05. Therefore, there is a statistically significant difference in sample means of male and female of health insurance policy holders in their Overall perception towards health insurance (p-value < 0.005). Hence H8 is accepted.

Alternative Hypothesis (H_1-9): There is a statistically significant difference in sample means of age group of health insurance policy holders in their Overall perception towards health insurance

The results of one-way ANOVA revealed there is a significant mean difference among different age groups with respect to General Perception, General Understanding, Coverage Benefits, Claim Process, Renewal Policy Changes, Customer Service and Support, Overall Satisfaction. Overall, there is significant difference in all the parameters of Overall Perception among various age groups of the respondents (p-value < 0.005). Hence H9 is accepted.

Alternative Hypothesis (H_1-10): There is a statistically significant difference in sample means of marital status of health insurance policy holders in their Overall perception towards health insurance

The results of the independent sample t-test revealed that there is a significant mean difference between marital status with respect to Claim Process, with a P value of 0.035. However, there are no significant differences in most other parameters of Overall Perception between unmarried and married respondents, as the p values obtained from the above-mentioned table are more than 0.05. Therefore, there is no statistically significant difference in sample means of marital status of health insurance policy holders in their Overall perception towards health insurance. Hence, H10 is rejected.

Alternative Hypothesis (H_1-11): There is a statistically significant difference in sample means of Educational Qualification of health insurance policy holders in their Overall perception towards health insurance

The results of one-way ANOVA revealed there is significant mean difference among educational qualification with respect to General Perception, General Understanding, Coverage Benefits, Customer Service and Support, Overall Satisfaction. Overall, there is significant difference in majority of the parameters of overall perception among various educational qualification of the respondents, except Claim Process and Renewal Policy Changes. Therefore, there is a statistically significant difference in sample means of Educational Qualification of health insurance policy holders in their Overall perception towards health insurance (p-value < 0.005). Hence H11 is accepted.

Alternative Hypothesis (H_1-12): There is a statistically significant difference in sample means of Residential Status of health insurance policy holders in their Overall perception towards health insurance

The results of one-way ANOVA revealed there is a significant mean difference among different Residential Status with respect to General Perception, General Understanding, Coverage Benefits, Claim Process, Renewal Policy Changes, Customer Service and Support, Overall Satisfaction. Overall, there is significant difference in all the parameters of Overall Perception among various Residential Status of the respondents (p-value < 0.005). Hence H12 is accepted.

Alternative Hypothesis (H_1-13): There is a statistically significant difference in sample means of Type of Family of health insurance policy holders in their Overall perception towards health insurance

The results of independent sample t-test revealed that there is significant mean difference in majority of the parameters of overall perception between joint family and nuclear family, as the p value obtained from the above parameters with respect to the family types are less than 0.05. But there is no significant mean difference between types of family with respect to General Understanding, as the p value above 0.05. Therefore, there is a statistically significant difference in sample means of Type of Family of health insurance policy holders in their Overall perception towards health insurance. Hence alternative hypothesis is accepted.

Alternative Hypothesis (H_1-14): There is a statistically significant difference in sample means of Annual Family Income of health insurance policy holders in their Overall perception towards health insurance.

The results of one-way ANOVA revealed there is significant mean difference among their annual family income with respect to General Perception, General Understanding, Claim Process, Renewal Policy Changes, Customer Service and Support, and Overall Satisfaction. But there is no significant mean difference among their annual family income with respect to Coverage Benefits. Overall, there is significant mean difference in majority of the parameters of overall perception among various levels of their annual family income, as the p value obtained from the above-mentioned statements are less than 0.05. Therefore, there is a statistically significant difference in sample means of Annual Family Income of health insurance policy holders in their Overall perception towards health insurance.

Alternative Hypothesis (H_1-15): The General Understanding of policyholder towards health insurance is significantly related to their General Perception.

the correlation coefficient between the General Understanding of policyholder towards health insurance and their General Perception has been .884. This indicates a strong positive correlation between them. The p-value for the two-tailed test of significance has been 0.000 which is statistically significant at the significance level of 0.01. Thus, the hypothesis formulated has been supported and the p-value suggests that the General Understanding of policyholder towards health insurance has been significantly related to their General Perception.

Alternative Hypothesis (H_1-16): There is a significant impact of service attributes by health insurance policyholders on their overall satisfaction.

'Model Summary on Multiple Linear Regression' presents different variants of 'R' values that accord guidance in assessing the model's overall fit. The first 'R' value explains the correlation coefficient between service attributes and Overall Satisfaction in the regression model. The 'R' value has been 0.959, reflecting a strong positive correlation between service attributes and Overall Satisfaction of health insurance policyholders. The second 'R' value is the 'R Square', which estimates the strength of the relationship between the regression model and the independent variables that represent service attributes. It clearly demonstrates how effectively the service attributes considered by health insurance policyholders can predict their overall satisfaction. In the current study, the 'R Square' value 0.921 outlines the proportion of variance in overall satisfaction explained by the set of three service attributes. the predictors of service attributes that included three service attributes encompassing Customer Service and Support, Claim Process, Renewal Policy Changes have accounted for 92.1% (0.921 x 100) of the variance in overall satisfaction.

The 'Coefficients on Regression Model' shows the statistical effects of each of the independent variables used in the statistical analysis on the dependent variables. The largest beta value under 'Standardised Coefficients' has been used to compare the relative contribution of each independent variable to the prediction of dependent variable. It is evident in table 6.45 that 'Customer Service and Support' have the largest beta coefficient of 0. 537. This indicates that 'Customer Service and Support' makes the strongest unique contribution to explain overall satisfaction. This has been followed by Renewal Policy Changes (0.375), and Claim Process (0.125).

Alternative Hypothesis (H_1-17): There is a significant association between gender and the satisfaction of health insurance policyholders.

'Chi-Square Tests on Gender and satisfaction' gives the result of the chi-square test performed to examine the association between gender and satisfaction. The Pearson Chi-Square test value is 14.323 and the p-value (Asymp. Sig) is 0.000. Since the p-value of 0.000 is lesser than the significance of the commonly accepted level of either 0.05 or 0.10, the hypothesis has been accepted. That means the male and female health insurance policyholders have been found to be significantly different in satisfaction. Hence, statistically, there is strong evidence of significant difference or association between gender and satisfaction.

Suggestions

Suggestions to the Insurance companies

- Leverage the high CAR for growth but ensure adequate risk management practices to mitigate financial risks associated with aggressive strategies.
- Gradually enhance capital allocation strategies to support growth and improve competitiveness without compromising stability.
- Evaluate the sustainability of increasing debt reliance and consider strategies to strengthen equity financing to reduce financial vulnerability.
- Evaluate the claims management process and identify high-claim areas or products for potential restructuring.
- Maintain focus on cost optimization and efficient claims management to preserve profitability and Continue investing in product innovation and customer satisfaction.
- Conduct regular policyholder education campaigns through various mediums (emails, webinars, app notifications) to enhance overall understanding.
- Address issues with claim speed and process complexity. Focus on increasing transparency, communication, and reducing delays to enhance customer perception of the overall claims experience.
- Continue enhancing the customer experience by refining premium rate structures and offering more flexible coverage options during renewal.

Suggestions to the IRDAI

- Monitor declining trends in asset quality to ensure companies maintain adequate equity levels. Consider implementing minimum equity-to-asset ratio standards to safeguard financial stability in the health insurance sector.
- Encourage companies to align with industry benchmarks, providing flexibility while ensuring companies do not take excessive risks or rely too heavily on reinsurers.
- Standardize guidelines for technical reserves to reduce volatility across companies while ensuring adequate financial preparation for future claims.
- Establish a benchmark operating expense ratio for health insurers and require periodic reporting against this benchmark and Encourage adoption of tech-driven solutions like AI for claims processing.
- Consider introducing liquidity requirements to ensure that insurers maintain a certain threshold of liquidity.
  And Monitor companies with low liquidity ratios closely.
- Introduce mandatory health insurance literacy programs or incentives for insurers to improve customer education.

Suggestions to the Policyholders

- Before purchasing a health insurance policy, it is essential to thoroughly understand its terms, conditions, and exclusions. Many policyholders face issues due to a lack of awareness about waiting periods, pre-existing disease coverage, and co-payment clauses. Reading the policy document carefully and seeking clarifications from the insurer can prevent misunderstandings in the future.
- Choosing the right health insurance plan should be based on your healthcare needs, financial capability, and family medical history rather than just the cost of premiums. Policies with adequate coverage for hospitalization, daycare treatments, and alternative medicine (AYUSH) can be beneficial. Comparing policies using online tools can help make an informed decision.
- The claim settlement process plays a crucial role in policyholder satisfaction. It is advisable to select an insurer with a high claim settlement ratio and a transparent claim processing system. Keeping necessary documents ready, understanding the

difference between cashless and reimbursement claims, and maintaining medical records can ensure a smooth claims experience.

- Timely renewal of your health insurance policy is vital to maintain benefits such as waiting period reductions and no-claim bonuses. Missing renewal deadlines can lead to policy lapse, requiring you to serve new waiting periods upon rejoining. If dissatisfied with your current insurer, consider porting your policy to another provider with better features.
- Good customer support is crucial in addressing queries, resolving disputes, and ensuring a hassle-free experience. Before choosing an insurer, check customer reviews, grievance redressal efficiency, and accessibility of support services. A responsive customer service team can significantly improve policyholder satisfaction.
- Insurance policies may undergo changes over time, including modifications in premium rates, coverage terms, and additional benefits. Staying updated on these changes helps policyholders make informed decisions and take advantage of any new features, such as enhanced riders or wellness programs, to maximize their benefits.
- To get the most out of your policy, utilize preventive health check-ups, wellness programs, and value-added services offered by the insurer. Additionally, claim tax benefits under Section 80D of the Income Tax Act for premium payments. Being proactive in understanding and using your policy benefits can lead to better financial security and healthcare access.

CONCLUSION

The findings of this study call for coordinated action from health insurance companies, regulators, and policyholders to strengthen the sector's performance and sustainability. Health insurance companies must prioritize enhancing their financial fundamentals, such as maintaining adequate capital reserves, improving asset quality, and leveraging technology to optimize operations, streamline claims processes, and deliver better customer experiences. Regulators should continue to provide a robust and adaptive framework, ensuring compliance while fostering innovation and competition. They must also focus on increasing awareness and accessibility of health insurance to underserved populations. Policyholders, on their part, are encouraged to make informed decisions by understanding policy terms, actively engaging with insurers, and providing feedback to help companies align offerings with customer needs. This collective effort will not only improve the financial stability and efficiency of health

insurance providers but also enhance trust, satisfaction, and the overall reach of health insurance in India.

SCOPE FOR FURTHER RESEARCH

1. Future research could compare the financial performance of health insurance companies in India with those in other countries to gain insights into global best practices and identify areas for improvement.
2. Further research could conduct longitudinal analyses to assess how financial performance evolves over time, particularly in response to economic cycles, pandemics, or other major disruptions.
3. A deeper analysis of the relationship between policyholder satisfaction and the financial performance of companies can be undertaken. This would help to understand how customer loyalty and retention contribute to long-term profitability.
4. Studies could focus on the financial viability and performance of niche products, such as health insurance policies for senior citizens, critical illnesses, and micro-insurance for rural populations.
5. Using advanced analytical techniques like Data Envelopment Analysis (DEA) or Stochastic Frontier Analysis (SFA), future studies can evaluate the operational efficiency and productivity of health insurance companies in India.

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